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0424

#6



ENTERED

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RAW SEQUENCE LISTING

DATE: 04/22/2002

PATENT APPLICATION: US/10/025,514

TIME: 16:20:21

Input Set : A:\36829-20002.00.txt

Output Set: N:\CRF3\04222002\J025514.raw

4 <110> APPLICANT: Philip J. BARR
 5 Helen GIBSON
 6 Philip PEMBERTON
 8 <120> TITLE OF INVENTION: MULTIFUNCTIONAL PROTEASE INHIBITORS AND
 9 THEIR USE IN TREATMENT OF DISEASE
 12 <130> FILE REFERENCE: 368292000200
 C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/025,514
 C--> 15 <141> CURRENT FILING DATE: 2002-04-03
 17 <150> PRIOR APPLICATION NUMBER: U.S. 60/256,699
 18 <151> PRIOR FILING DATE: 2000-12-18
 20 <150> PRIOR APPLICATION NUMBER: U.S. 60/331,966
 21 <151> PRIOR FILING DATE: 2001-11-20
 23 <160> NUMBER OF SEQ ID NOS: 33
 25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 27 <210> SEQ ID NO: 1
 28 <211> LENGTH: 1182
 29 <212> TYPE: DNA
 30 <213> ORGANISM: Homo sapiens
 32 <400> SEQUENCE: 1
 33 gaagaccctc aaggcgacgc cgctcaaaaa accgacacca gtcacacga ccaagaccat 60
 34 ccgactttta ataaaattac tccaaattta gccgaatttg ctttttcttt gtatagacaa 120
 35 ttagctcatc aaagtaattc tactaacatt ttttttagtc ctgtttctat tgccactgct 180
 36 ttgcgcattg tgagtttagg tactaaagcc gatacccatg acgagatttt agaagggtta 240
 37 aactttaatt tgaccgaaat cccagaagcc caaattcacg agggttttca agagttgttg 300
 38 agaactttga atcaacctga ttctcaattg caattaacta ctggtaacg tttatttttg 360
 39 tctgaagggt taaaattggg tgacaaattc ctagaagacg tcaagaaact atatcatagt 420
 40 gaggttttta ccgttaattt tgggtgatac gaggaagcta aaaagcaaataa taatgattat 480
 41 gttgagaaag gcacccaggg taagatcggt gacctagtta aagaattaga tcgtgatacc 540
 42 gtcttcgcac tagttaacta ttttttttca aagggttaagt gggaacgtcc tttcgagggt 600
 43 aaagatactg aagaggaaga ttttcatggt gatcaagtta ctactgtcaa agttccaatg 660
 44 atgaaaagac tgggtatggt caatattcaa cattgcaaaa aattaagttc ttgggtctta 720
 45 ttaatgaagt atttaggtaa cgctactgct attttttttt taccagacga aggttaagctt 780
 46 caacatttag agaatgagtt gactcatgac attattacta aattttttaga gaacgaggat 840
 47 cgctcgtagcg cttctctgca cctgccaaag ttaagtatca ccggtactta cgacttaaaa 900
 48 tctgttttag gccagttagg tattaccaaa gttttttcta acggtgccga tttgagtggt 960
 49 gttactgaag aagctccatt aaaattgagt aaagctgttc acaaagccgt cttaactatt 1020
 50 gatgaaaagg gtaccgaggc cgccggcgct atgttcctgg aagctattcc aatgagcatt 1080
 51 ccaccagaag ttaaatttaa taaaccattc gtttttctga tgatcgagca gaacactaaa 1140
 52 agccatttgt ttatgggtaa ggttgtcaac ccaactcaga ag 1182
 54 <210> SEQ ID NO: 2
 55 <211> LENGTH: 394
 56 <212> TYPE: PRT
 57 <213> ORGANISM: Homo sapiens

RAW SEQUENCE LISTING

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59 <400> SEQUENCE: 2
60 Glu Asp Pro Gln Gly Asp Ala Ala Gln Lys Thr Asp Thr Ser His His
61 1 5 10 15
62 Asp Gln Asp His Pro Thr Phe Asn Lys Ile Thr Pro Asn Leu Ala Glu
63 20 25 30
64 Phe Ala Phe Ser Leu Tyr Arg Gln Leu Ala His Gln Ser Asn Ser Thr
65 35 40 45
66 Asn Ile Phe Phe Ser Pro Val Ser Ile Ala Thr Ala Phe Ala Met Leu
67 50 55 60
68 Ser Leu Gly Thr Lys Ala Asp Thr His Asp Glu Ile Leu Glu Gly Leu
69 65 70 75 80
70 Asn Phe Asn Leu Thr Glu Ile Pro Glu Ala Gln Ile His Glu Gly Phe
71 85 90 95
72 Gln Glu Leu Leu Arg Thr Leu Asn Gln Pro Asp Ser Gln Leu Gln Leu
73 100 105 110
74 Thr Thr Gly Asn Gly Leu Phe Leu Ser Glu Gly Leu Lys Leu Val Asp
75 115 120 125
76 Lys Phe Leu Glu Asp Val Lys Lys Leu Tyr His Ser Glu Ala Phe Thr
77 130 135 140
78 Val Asn Phe Gly Asp Thr Glu Glu Ala Lys Lys Gln Ile Asn Asp Tyr
79 145 150 155 160
80 Val Glu Lys Gly Thr Gln Gly Lys Ile Val Asp Leu Val Lys Glu Leu
81 165 170 175
82 Asp Arg Asp Thr Val Phe Ala Leu Val Asn Tyr Ile Phe Phe Lys Gly
83 180 185 190
84 Lys Trp Glu Arg Pro Phe Glu Val Lys Asp Thr Glu Glu Glu Asp Phe
85 195 200 205
86 His Val Asp Gln Val Thr Thr Val Lys Val Pro Met Met Lys Arg Leu
87 210 215 220
88 Gly Met Phe Asn Ile Gln His Cys Lys Lys Leu Ser Ser Trp Val Leu
89 225 230 235 240
90 Leu Met Lys Tyr Leu Gly Asn Ala Thr Ala Ile Phe Phe Leu Pro Asp
91 245 250 255
92 Glu Gly Lys Leu Gln His Leu Glu Asn Glu Leu Thr His Asp Ile Ile
93 260 265 270
94 Thr Lys Phe Leu Glu Asn Glu Asp Arg Arg Ser Ala Ser Leu His Leu
95 275 280 285
96 Pro Lys Leu Ser Ile Thr Gly Thr Tyr Asp Leu Lys Ser Val Leu Gly
97 290 295 300
98 Gln Leu Gly Ile Thr Lys Val Phe Ser Asn Gly Ala Asp Leu Ser Gly
99 305 310 315 320
100 Val Thr Glu Glu Ala Pro Leu Lys Leu Ser Lys Ala Val His Lys Ala
101 325 330 335
102 Val Leu Thr Ile Asp Glu Lys Gly Thr Glu Ala Ala Gly Ala Met Phe
103 340 345 350
104 Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Val Lys Phe Asn Lys
105 355 360 365
106 Pro Phe Val Phe Leu Met Ile Glu Gln Asn Thr Lys Ser Pro Leu Phe
107 370 375 380

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108 Met Gly Lys Val Val Asn Pro Thr Gln Lys
109 385                               390
111 <210> SEQ ID NO: 3
112 <211> LENGTH: 321
113 <212> TYPE: DNA
114 <213> ORGANISM: Homo sapiens
116 <400> SEQUENCE: 3
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118 tacaagaagc cagaatgtca atccgactgg caatgtccag gtaagaagag atgtttgtcca      120
119 gacacttggt gtatcaagtg tctagaccca gttgacaccc caaacccaac tagaagaaag      180
120 ccaggtaagt gtccagttac ttacgggtcaa tgtttgatgt tgaaccacc aaacttctgt      240
121 gaaatggacg gtcaatgtaa gagagacttg aagtgttgta tgggtatgtg tggtaagtcc      300
122 tgtgtttccc cagtcaaggc c
124 <210> SEQ ID NO: 4
125 <211> LENGTH: 107
126 <212> TYPE: PRT
127 <213> ORGANISM: Homo sapiens
129 <400> SEQUENCE: 4
130 Ser Gly Lys Ser Phe Lys Ala Gly Val Cys Pro Pro Lys Lys Ser Ala
131 1                               5                               10                               15
132 Gln Cys Leu Arg Tyr Lys Lys Pro Glu Cys Gln Ser Asp Trp Gln Cys
133                               20                               25                               30
134 Pro Gly Lys Lys Arg Cys Cys Pro Asp Thr Cys Gly Ile Lys Cys Leu
135                               35                               40                               45
136 Asp Pro Val Asp Thr Pro Asn Pro Thr Arg Arg Lys Pro Gly Lys Cys
137                               50                               55                               60
138 Pro Val Thr Tyr Gly Gln Cys Leu Met Leu Asn Pro Pro Asn Phe Cys
139 65                               70                               75                               80
140 Glu Met Asp Gly Gln Cys Lys Arg Asp Leu Lys Cys Cys Met Gly Met
141                               85                               90                               95
142 Cys Gly Lys Ser Cys Val Ser Pro Val Lys Ala
143                               100                              105
145 <210> SEQ ID NO: 5
146 <211> LENGTH: 552
147 <212> TYPE: DNA
148 <213> ORGANISM: Homo sapiens
150 <400> SEQUENCE: 5
151 tgcacctgtg tcccacccca cccacagacg gccttctgca attccgacct cgtcatcagg      60
152 gccaagtctg tggggacacc agaagtcaac cagaccacct tataccagcg ttatgagatc      120
153 aagatgacca agatgtataa agggttccaa gccttagggg atgccgctga catccggttc      180
154 gtctacaccc ccgccatgga gagtgtctgc ggatacttcc acaggtccca caaccgcagc      240
155 gaggagtttc tcattgctgg aaaactgcag gatggactct tgcacatcac tacctgcagt      300
156 ttcgtggctc cctggaacag cctgagctta gctcagcgcc ggggcttcac caagacctac      360
157 actgttggtc gtgaggaatg cacagtgttt ccctgtttat ccatcccctg caaactgcag      420
158 agtggcactc attgcttggt gacggaccag ctctccaag gctctgaaaa gggcttccag      480
159 tcccgtcacc ttgcctgcct gcctcgggag ccagggtgtg gcacctggca gtccctgcgg      540
160 tcccagatag cc
162 <210> SEQ ID NO: 6
163 <211> LENGTH: 184

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RAW SEQUENCE LISTING

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Output Set: N:\CRF3\04222002\J025514.raw

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164 <212> TYPE: PRT
165 <213> ORGANISM: Homo sapiens
167 <400> SEQUENCE: 6
168 Cys Thr Cys Val Pro Pro His Pro Gln Thr Ala Phe Cys Asn Ser Asp
169 1 5 10 15
170 Leu Val Ile Arg Ala Lys Phe Val Gly Thr Pro Glu Val Asn Gln Thr
171 20 25 30
172 Thr Leu Tyr Gln Arg Tyr Glu Ile Lys Met Thr Lys Met Tyr Lys Gly
173 35 40 45
174 Phe Gln Ala Leu Gly Asp Ala Ala Asp Ile Arg Phe Val Tyr Thr Pro
175 50 55 60
176 Ala Met Glu Ser Val Cys Gly Tyr Phe His Arg Ser His Asn Arg Ser
177 65 70 75 80
178 Glu Glu Phe Leu Ile Ala Gly Lys Leu Gln Asp Gly Leu Leu His Ile
179 85 90 95
180 Thr Thr Cys Ser Phe Val Ala Pro Trp Asn Ser Leu Ser Leu Ala Gln
181 100 105 110
182 Arg Arg Gly Phe Thr Lys Thr Tyr Thr Val Gly Cys Glu Glu Cys Thr
183 115 120 125
184 Val Phe Pro Cys Leu Ser Ile Pro Cys Lys Leu Gln Ser Gly Thr His
185 130 135 140
186 Cys Leu Trp Thr Asp Gln Leu Leu Gln Gly Ser Glu Lys Gly Phe Gln
187 145 150 155 160
188 Ser Arg His Leu Ala Cys Leu Pro Arg Glu Pro Gly Leu Cys Thr Trp
189 165 170 175
190 Gln Ser Leu Arg Ser Gln Ile Ala
191 180
193 <210> SEQ ID NO: 7
194 <211> LENGTH: 1525
195 <212> TYPE: DNA
196 <213> ORGANISM: Homo sapiens
198 <400> SEQUENCE: 7
199 tctagaccat gtctggaaag tctttcaagg ccggtgtttg tccaccaaag aagtccgctc 60
200 aatgtttgag atacaagaag ccagaatgtc aatccgactg gcaatgtcca ggtaagaaga 120
201 gatgttgatc agacacttgt ggtatcaagt gtctagaccc agttgacacc ccaaacccaa 180
202 ctagaagaaa gccaggtaag tgtccagtta cttacgggtc atgtttgatg ttgaaccac 240
203 caaacttctg tgaaatggac ggtcaatgta agagagactt gaagtgttgt atgggtatgt 300
204 gtggtaaagtc ctgtgtttcc ccagtcaagg ccatggaaga ccctcaaggc gacgccgctc 360
205 aaaaaaccga caccagtcac cagaccaag accatccgac ttttaataaa attactocaa 420
206 atttagccga atttgctttt tctttgtata gacaattagc tcatcaaagt aattctacta 480
207 acattttttt tagtcctggt tctattgcc aatgtttcgc catgttgagt ttaggtacta 540
208 aagccgatac ccatgacgag attttagaag gtttaaactt taatttgacc gaaatcccag 600
209 aagcccaaat tcacgagggt tttcaagagt tgttgagaac tttgaatcaa cctgattctc 660
210 aattgcaatt aactactggt aacggtttat tttgtctga aggtttaaaa ttggttgaca 720
211 aattcctaga agacgtcaag aaactatata atagttaggc ttttaccgtt aattttggtg 780
212 atactgagga agctaaaaag caaattaatg attatgttga gaaaggcacc cagggttaaga 840
213 tcgttgacct agttaagaa ttagatcgtg ataccgtctt cgcactagtt aactatattt 900
214 ttttcaaggg taagtggaa cgtcctttcg aggttaaaga tactgaagag gaagattttc 960
215 atgttgatca agttactact gtcaaagttc caatgatgaa aagactgggt atgttcaata 1020

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Output Set: N:\CRF3\04222002\J025514.raw

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216 ttcaacattg caaaaaatta agttcttggg tcttattaat gaagtattta ggtaacgcta 1080
217 ctgctatttt ttttttacca gacgaaggta agcttcaaca tttagagaat gagttgactc 1140
218 atgacattat tactaaattt ttagagaacg aggatcgtcg tagcgcttct ctgcacctgc 1200
219 caaagttaag tatcaccggg acttacgact taaaatctgt tttaggccag ttaggtatta 1260
220 ccaaagtttt ttctaacggg gccgatttga gtggtgttac tgaagaagct ccattaaaaat 1320
221 tgaagtaaagc tggtcacaaa gccgtcttaa ctattgatga aaagggtacc gaggccgccg 1380
222 gcgctatgtt cctggaagct attccaatga gcattccacc agaagttaaa tttataaac 1440
223 cattcgtttt tctgatgacg gagcagaaca ctaaaagccc attgtttatg ggtaagggtg 1500
224 tcaacccaac tcagaagtag tcgac 1525
226 <210> SEQ ID NO: 8
227 <211> LENGTH: 503
228 <212> TYPE: PRT
229 <213> ORGANISM: Homo sapiens
231 <400> SEQUENCE: 8
232 Met Ser Gly Lys Ser Phe Lys Ala Gly Val Cys Pro Pro Lys Lys Ser
233 1 5 10 15
234 Ala Gln Cys Leu Arg Tyr Lys Lys Pro Glu Cys Gln Ser Asp Trp Gln
235 20 25 30
236 Cys Pro Gly Lys Lys Arg Cys Cys Pro Asp Thr Cys Gly Ile Lys Cys
237 35 40 45
238 Leu Asp Pro Val Asp Thr Pro Asn Pro Thr Arg Arg Lys Pro Gly Lys
239 50 55 60
240 Cys Pro Val Thr Tyr Gly Gln Cys Leu Met Leu Asn Pro Pro Asn Phe
241 65 70 75 80
242 Cys Glu Met Asp Gly Gln Cys Lys Arg Asp Leu Lys Cys Cys Met Gly
243 85 90 95
244 Met Cys Gly Lys Ser Cys Val Ser Pro Val Lys Ala Met Glu Asp Pro
245 100 105 110
246 Gln Gly Asp Ala Ala Gln Lys Thr Asp Thr Ser His His Asp Gln Asp
247 115 120 125
248 His Pro Thr Phe Asn Lys Ile Thr Pro Asn Leu Ala Glu Phe Ala Phe
249 130 135 140
250 Ser Leu Tyr Arg Gln Leu Ala His Gln Ser Asn Ser Thr Asn Ile Phe
251 145 150 155 160
252 Phe Ser Pro Val Ser Ile Ala Thr Ala Phe Ala Met Leu Ser Leu Gly
253 165 170 175
254 Thr Lys Ala Asp Thr His Asp Glu Ile Leu Glu Gly Leu Asn Phe Asn
255 180 185 190
256 Leu Thr Glu Ile Pro Glu Ala Gln Ile His Glu Gly Phe Gln Glu Leu
257 195 200 205
258 Leu Arg Thr Leu Asn Gln Pro Asp Ser Gln Leu Gln Leu Thr Thr Gly
259 210 215 220
260 Asn Gly Leu Phe Leu Ser Glu Gly Leu Lys Leu Val Asp Lys Phe Leu
261 225 230 235 240
262 Glu Asp Val Lys Lys Leu Tyr His Ser Glu Ala Phe Thr Val Asn Phe
263 245 250 255
264 Gly Asp Thr Glu Glu Ala Lys Lys Gln Ile Asn Asp Tyr Val Glu Lys
265 260 265 270
266 Gly Thr Gln Gly Lys Ile Val Asp Leu Val Lys Glu Leu Asp Arg Asp

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RAW SEQUENCE LISTING ERROR SUMMARY
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:12; Xaa Pos. 1,3,5

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/025,514

DATE: 04/22/2002

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Input Set : A:\36829-20002.00.txt

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L:14 M:270 C: Current Application Number differs, Replaced Current Application Number
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:439 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:12
L:440 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0